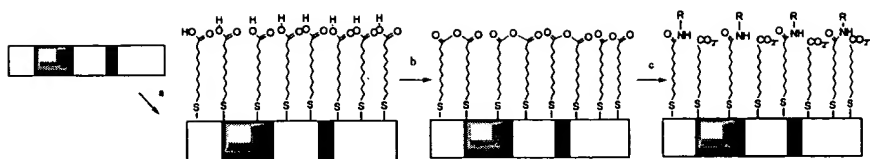


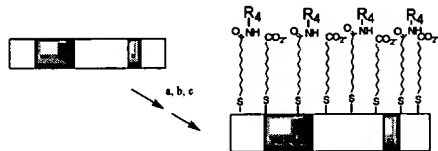
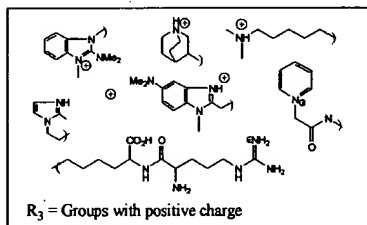
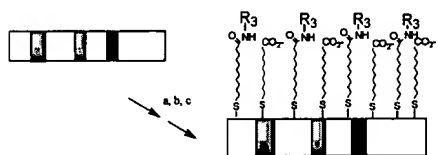
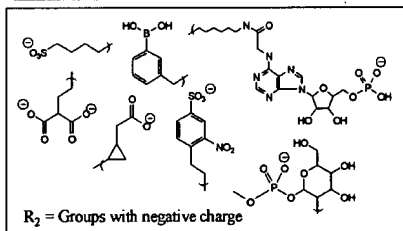
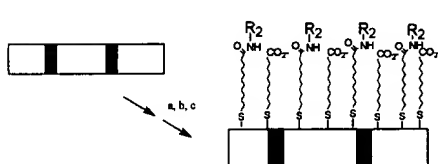
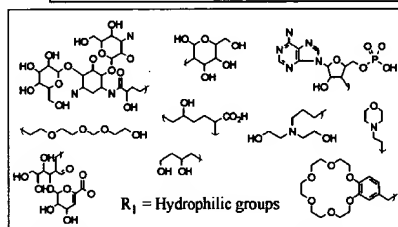
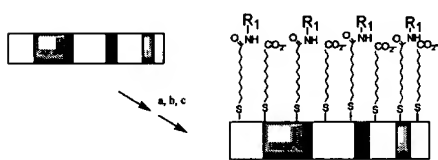
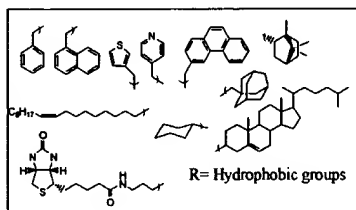
The diagram illustrates the five steps of a competitive immunoassay:

- A- FREE ANALYTE:** A Y-shaped antibody molecule with a fluorophore (F) is shown above a solid support with binding sites.
- B- ANALYTE-RECEPTOR COMPLEX:** A small diamond-shaped analyte (A) is bound to the Y-shaped antibody, which is still attached to the solid support.
- C- FREE RECEPTOR:** The Y-shaped antibody is detached from the solid support and is free in solution.
- D- ANALYTE-AUTOANTIBODY COMPLEX:** The Y-shaped antibody is bound to the small diamond-shaped analyte (A), which is now attached to the solid support.
- E- FREE AUTOANTIBODY:** The Y-shaped antibody is detached from the solid support and is free in solution.

4



a) $\text{HS}(\text{CH}_2)_{10}\text{CO}_2\text{H}$, b) dehydration, c) RNH_2



R_4 = Cyclodextrins, Dendrimers, Calixarenes
Peptides, Proteins, Nucleic Acids, Aptamers

FIGURE 2

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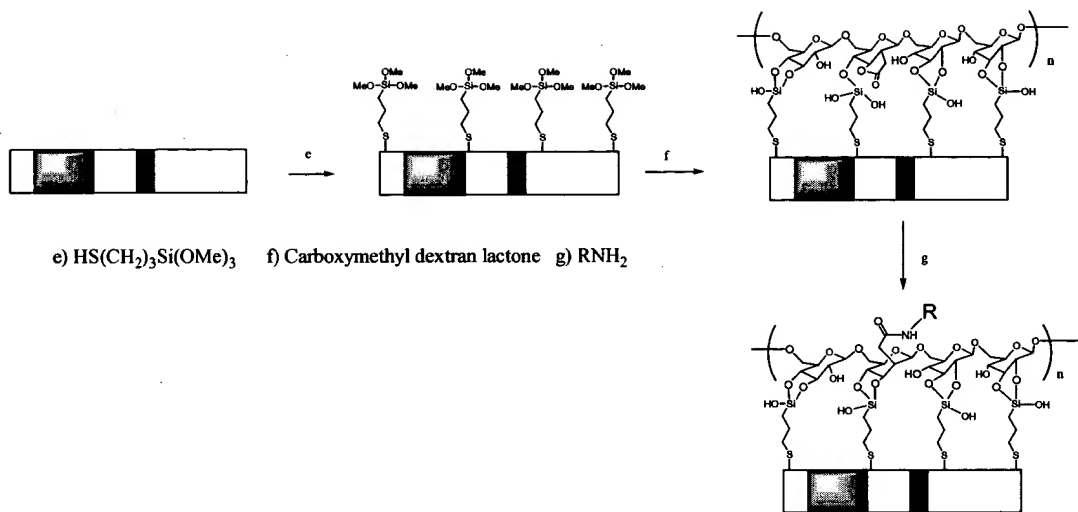


FIGURE 3

The reaction scheme illustrates the synthesis of a streptavidin-dextran conjugate. It begins with a dextran polymer (represented by a branched chain of glucose units) with terminal amine groups (H_2N). This polymer is reacted with a linker molecule (10, 40, 70 and 500kD AmDx) in the presence of 0.1 to 0.5 equivalents of amine. The linker contains a pyridine ring and a thiol group. The reaction is carried out in TCEP at pH 6.0. The resulting intermediate is then reacted with streptavidin (represented by a small molecule with a carboxylic acid group) in the presence of EDAC and streptavidin. The final product is a dextran polymer conjugated with streptavidin.

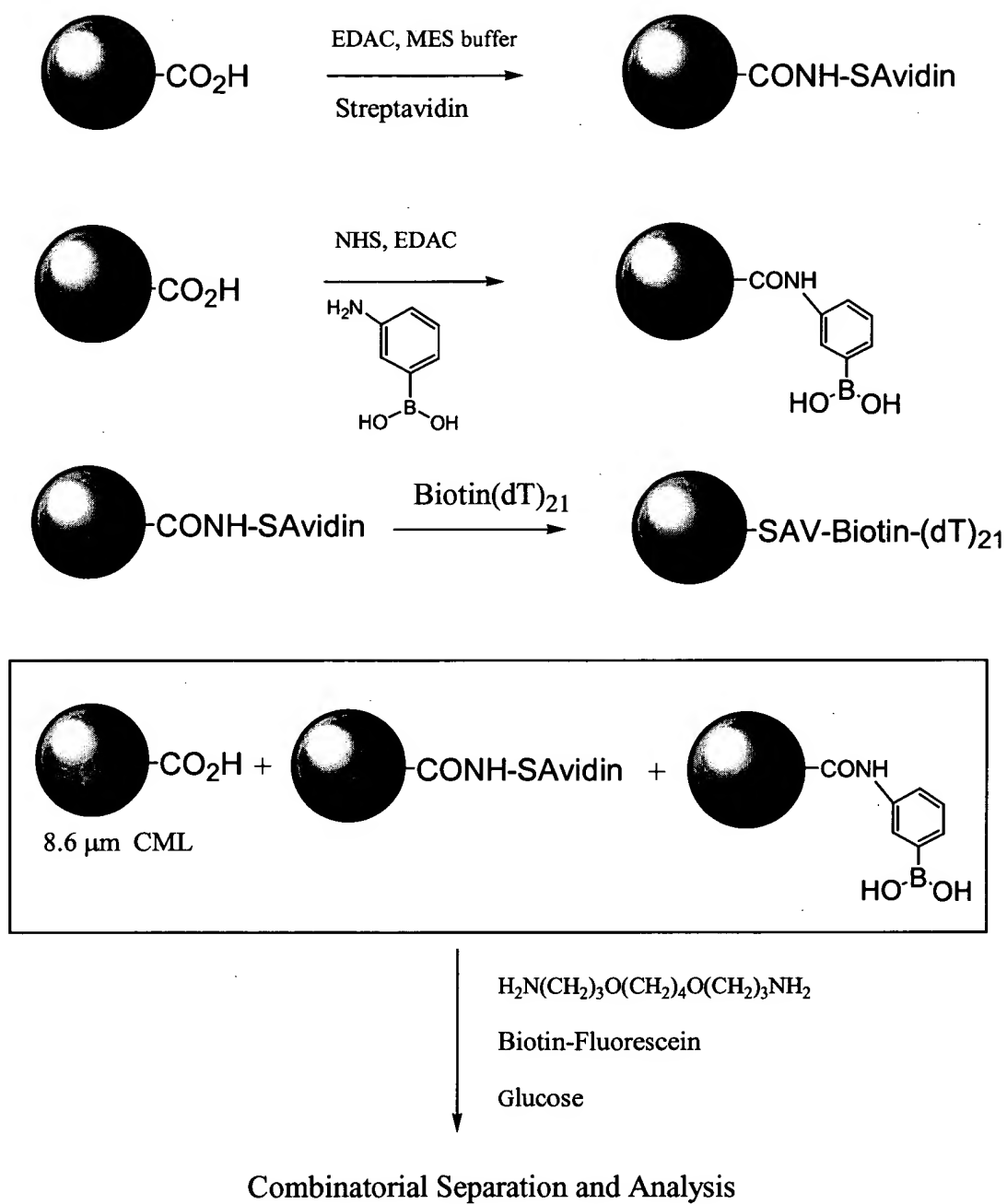


FIGURE 5